

PROCEEDINGS
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DESCRIPTIONS OF FIVE NEW MAMMALS FROM
MEXICO.

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The mammals described below were collected by E. W. Nelson and myself in the course of field work for the Biological Survey in southern Mexico. The wood rats all belong to the *ferruginea** group, of which *Neotoma tenuicauda* is also a member. The *Liomys* is an additional species of the *pictus* group. For the opportunity to describe these new forms I am indebted to Dr. C. Hart Merriam, under whose supervision the field work has been carried on.

***Neotoma picta* sp. nov.**

Type from mountains near Chilpancingo, Guerrero, Mexico (altitude, 10,000 feet). Adult male, No. 70,050, U. S. National Museum, Biological Survey Collection, December 20, 1894, E. W. Nelson and E. A. Goldman. Original number 7179.

Characters.—Size medium; color rich orange-rufous to ferruginous of Ridgway; tail long and slender, covered with short hairs; ears rather small. Closely related to *N. tenuicauda* but slightly larger; color very much brighter. Somewhat similar to *N. ferruginea*, but smaller and brighter colored; outer sides of forearms and hind legs not dusky as in *N. ferruginea*.

Color.—Type: Ground color of upper parts rich orange-rufous (varying in some specimens to ferruginous) of Ridgway, brightest on cheeks, shoulders, and along sides, darkened on face, top of head, and along back

*Specimens from Volcan Santa Maria, Guatemala, which agree well with the original description of *Neotoma ferruginea*, have been assumed to be nearly typical and used for comparison.

by a rather abundant sprinkling of black-tipped hairs; under parts nearly pure white (in some specimens suffused with salmon), the plumbeous basal color showing through indistinctly; axillæ orange-rufous; ears covered with short dusky hairs; tail indistinctly bicolor (occasionally concolor), dusky above, paler below; fore feet yellowish white; hind feet to toes irregularly clouded with dusky or pale fulvous, the toes white.

Skull.—The skull indicates close relationship to *N. tenuicauda*, but is slightly larger and the nasals are longer. Compared with *N. ferruginea*, the skull is smaller, with narrower frontal region.

Measurements.—Type: Total length, 368; tail vertebræ, 180; hind foot, 37. Average of eight adult females from the type locality: Total length, 344 (338–355); tail vertebræ, 170 (166–182); hind foot, 34 (33–35.5). Skull of type: Greatest length, 43.3; basilar length of Hensel, 35; zygomatic breadth, 23; length of nasals, 17.4; interorbital breadth, 5; palatal length, 8.6; diastema, 11.9; upper molar series on alveolus, 8.7.

Specimens examined.—Total number, 31, all from the State of Guerrero, as follows: Mountains near Chilpancingo (type locality), 16; Omilteme, 15.

Remarks.—*Neotoma picta* appears to be more closely related to *N. tenuicauda* than to any other known form, but its remarkable color is alone sufficient to distinguish it from that species.

***Neotoma isthmica* sp. nov.**

Type from Huilotepec, 8 miles south of Tehuantepec, Oaxaca, Mexico (altitude, 100 feet). Adult female, No. 73,187, U. S. National Museum, Biological Survey Collection, May 5, 1895, E. W. Nelson and E. A. Goldman. Original number 7843.

Characters.—Size rather large; color orange-rufous to ferruginous; tail long, moderately stout, thinly haired and coarsely scaly; ears medium. Similar to *N. ferruginea*, but much brighter colored and without dusky forearms and hind legs; skull narrower and heavier. In color closely resembling *N. picta*, but larger, with stouter, more coarsely scaly tail, and differing in cranial characters.

Color.—Type (in worn pelage): Upper parts in general between orange-rufous and ferruginous of Ridgway, fading to grayish fulvous on outer sides of forearms and hind legs; face, top of head, and back thinly sprinkled with blackish hairs; under parts, including upper lip, lower sides of face, and inner sides of fore and hind legs, soiled white; tail indistinctly bicolor, brownish above, paler below; fore feet pure white; hind feet to toes clouded with dusky (in some specimens pure white), the toes white.

Skull.—Similar to that of *N. ferruginea* but narrower, heavier, and more arched across anterior roots of zygomata. Compared with *N. picta* the skull is larger, longer, heavier, relatively narrower, and more arched across anterior roots of zygomata; frontal region flatter posteriorly; braincase less smoothly rounded.

Measurements.—Type: Total length, 395; tail vertebræ, 198; hind foot, 38. Average of nine adult males and females from the type locality:

Total length, 368 (355–390); tail vertebræ, 182 (166–198); hind foot, 37 (35–39). Skull of type: Greatest length, 48.4; basilar length of Hensel, 38.4; zygomatic breadth, 23.7; length of nasals, 19; interorbital breadth, 6.2; palatal length, 8.3; diastema, 12.9; upper molar series on alveolus, 9.

Specimens examined.—Total number, 19, all from the state of Oaxaca, as follows: Huilotepec (type locality), 16; Juchitan, 3.

***Neotoma parvidens* sp. nov.**

Type from Juquila, Oaxaca, Mexico (altitude, 5000 feet). Adult female, No. 71,586, U. S. National Museum, Biological Survey Collection, February 27, 1895, E. W. Nelson and E. A. Goldman. Original number 7587.

Characters.—Size very small; color ferruginous; tail rather short and slender, covered with short hairs; ears small. Closely resembling *N. picta* in color but very much smaller; skull smaller and lighter, with narrower nasals and smaller teeth.

Color.—Upper parts ferruginous (varying along sides in some specimens to orange-rufous) of Ridgway, becoming brownish fulvous over outer sides of forearms and hind legs; face, top of head, and back (in some specimens the sides also) rather thickly sprinkled with black-tipped hairs; underparts, including upper lip and part of cheeks, nearly pure white, the plumbeous basal color showing through indistinctly; axillæ orange-rufous; ears covered with short dusky hairs; tail dusky above, paler below; fore feet and toes of hind feet yellowish white; hind feet to toes irregularly clouded with dusky (in two out of five specimens, pure white).

Skull.—Similar in general form to that of *N. tenuicauda*, but smaller, lighter, and usually more arched; interorbital breadth relatively greater; rostrum usually more decurved, nasals narrower and more wedge-shaped; teeth relatively much smaller.

Measurements.—Type: Total length, 295; tail vertebræ, 141; hind foot, 31. Average of five adult males and females from the type locality: Total length 300 (282–317); tail vertebræ, 149 (141–157); hind foot, 31 (30–32). Skull of type: Greatest length, 40.5; basilar length of Hensel, 32.5; zygomatic breadth, 20.7; length of nasals, 15.2; interorbital breadth, 5.3; palatal length, 7.3; diastema, 11.3; upper molar series on alveolus, 7.4.

Specimens examined.—Five, all from the type locality.

***Neotoma tropicalis* sp. nov.**

Type from Totontepec, Oaxaca, Mexico (altitude, 6500 feet). Adult male No. 68,593, U. S. National Museum, Biological Survey Collection, July 17, 1894, E. W. Nelson and E. A. Goldman. Original number 6468.

Characters.—Size small; tail rather short, slender, and thinly haired; ears rather small. In color closely resembling *N. tenuicauda* but brownish of upper parts encroaching on under parts; skull somewhat similar

to that of *N. tenuicauda*, but nasals longer and narrower and premaxillæ longer.

Color.—Upper parts dark brown, becoming brownish fulvous on cheeks, shoulders, and along sides, this color encroaching on under parts posteriorly, leaving a narrow, whitish area along the median line of the belly; rest of under parts, except a salmon colored band across pectoral region in the type, dull whitish (the plumbeous basal color showing through); ears faintly edged with whitish; tail nearly unicolor, dusky above, slightly paler below; fore and hind feet clouded with dusky, the toes of hind feet whitish.

Skull.—Somewhat like that of *N. tenuicauda*, but nasals more wedge-shaped, much longer and narrower, reaching plane of lachrymals; ascending branches of premaxillæ very long, reaching beyond plane of lachrymals; frontal region broader and flatter posteriorly; teeth smaller. Compared with that of *N. parvidens*, the skull is larger and flatter, braincase larger and more smoothly rounded; nasals and ascending branches of premaxillæ longer; teeth larger.

Measurements.—Type: Total length, 325; tail vertebræ, 156; hind foot, 34. Skull of type: Greatest length, 41.3; basilar length of Hensel, 33.5; zygomatic breadth, 22.2; length of nasals, 16.5; interorbital breadth, 5.8; palatal length, 7.9; diastema, 11.2; upper molar series on alveolus, 8.3.

Specimens examined.—Two, from the type locality.

***Liomys parviceps* sp. nov.**

Type from La Salada, 40 miles south of Uruapan, Michoacan, Mexico. Adult female, No. 126,477, U. S. National Museum, Biological Survey Collection, March 19, 1903, E. W. Nelson and E. A. Goldman. Original number 16,194.

Characters.—Size very small; color reddish; tail of moderate length. Similar to *L. plantinarenensis* but less fulvous; skull smaller; tail slightly longer; hind foot shorter, 6- instead of 5-tuberculate.

Color.—Upper parts grizzled brownish fulvous; under parts, fore and hind feet, white; fulvous lateral line rather faint; ears edged with whitish; tail distinctly bicolor, brownish above, whitish below.

Skull.—Smallest of the known species of the genus. Similar to that of *L. plantinarenensis*, but smaller and flatter; braincase less expanded; interparietal smaller; rostrum less decurved; nasals more arched anteriorly, notched posteriorly as in *L. plantinarenensis*.

Measurements.—Type: Total length, 202; tail vertebræ, 110; hind foot, 24. Average of five adult males and females from the type locality: Total length, 204 (197-214); tail vertebræ, 105 (102-110); hind foot, 24 (24). Skull of type: Greatest length, 28.3; basilar length of Hensel, 20; zygomatic breadth, 13; length of nasals, 11.5; interorbital breadth, 6.7; interparietal, 3.2 x 8.3; upper molar series on alveolus, 4.2.

Specimens examined.—Total number, 16, from the following localities: La Salada, Michoacan (type locality), 11; Rio Balsas, Guerrero, 5.